2.12 Discovery of Non-MR Peer May Yield Unreachable NID

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If non-MR peer (2.10.8) is discovered by a 2.12 MR peer, the following problem may happen: if non-MR peer has LNets that are not defined on the MR peer, it is possible that a NID on the undefined LNet is listed as primary. Later this causes communication problems when mounting.

Status

Open, reproducible in 2.12. Not an issue on master and 2.13.

Steps To Reproduce

Configuration

Prepare two nodes, one running 2.10.8, another 2.12.4 build. Configure LNet similar to the following:

PeerA (2.10.8 non-MR)	PeerB (2.12.4 MR)
#> Inetctl net show net: - net type: lo local NI(s): - nid: 0@lo status: up - net type: o2ib local NI(s): - nid: 192.168.1.123@o2ib status: up interfaces:	#> lnetctl net show net: - net type: lo local NI(s): - nid: 0@lo status: up - net type: o2ib4 local NI(s): - nid: 192.168.1.105@o2ib4 status: up interfaces: 0: ib0

Procedure

Run discovery of PeerA from PeerB and check the results:

```
#> lnetctl discover 192.168.1.123@o2ib4
                                           #> lnetctl discover 192.168.1.123@o2ib4
discover:
                                           discover:
    - primary nid: 192.168.1.123@o2ib
                                               - primary nid: 192.168.1.123@o2ib4
     Multi-Rail: False
                                               Multi-Rail: False
     peer ni:
                                                peer ni:
       - nid: 192.168.1.123@o2ib4
                                                  - nid: 192.168.1.123@o2ib4
       - nid: 192.168.1.123@o2ib
                                           #> lnetctl peer show
#> lnetctl peer show
                                           peer:
                                               - primary nid: 192.168.1.123@o2ib4
peer:
   - primary nid: 192.168.1.123@o2ib
                                                Multi-Rail: False
     Multi-Rail: False
                                                peer ni:
     peer ni:
                                                  - nid: 192.168.1.123@o2ib4
       - nid: 192.168.1.123@o2ib4
                                                    state: NA
         state: NA
       - nid: 192.168.1.123@o2ib
         state: NA
```

Note that in "problem" scenario, PeerA's primary NID is on o2ib net, which is not accessible from PeerB.

Resolution

Port of LU-11641 - Getting issue details... STATUS resolves the issue.

References

